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Researchers at Chula Medicine in Thailand explain detection of latent dementia

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Developed a blood test for markers of Alzheimer's that can give a 10-year warning



According to the scientists at Thai Red Cross Emerging Infectious Diseases Health Science Center, Faculty of Medicine, Chulalongkorn University, Thailand, Alzheimer's has an incubation period of 10 – 15 years before the onset of symptoms. By the time the symptoms manifest, the patient would have already lost a lot of brain cells, and rehabilitating or salvaging the brain is difficult.

The team of scientist have now developed a medical technology allowing them to detect the presence of the disease ahead of people's retirement age to allow them to take care of themselves and stay away from dementia.

Dementia and Alzheimer's often occur in the elderly aged 60 and older, with 1 in 16 people over the age of 60 having a chance of developing Alzheimer's disease, while in those 80 and older, the ratio increases to 1 in 6.

Two traditional ways to check for Alzheimer's disease before the symptoms show are PET Scan (Positron Emission Tomography), and spinal tap and subsequent measurement of the level of Alzheimer's-causing protein in spinal fluid.

The scientists at Thai Red Cross Emerging Infectious Diseases Health Science Center are using immunological techniques to perform blood tests instead of spinal fluid, and analysis is done by Simoa (Single molecule array) or LC-MS (Mass spectrometer) detectors to detect *phosphorylated Tau* in the blood which can indicate the presence of latent Alzheimer's, and *Neurofilament light chan*, a brain cells loss test. The project is funded by the Institute of Health Systems Research Institute (HSRI).

This approach offers a more affordable solution with a less complex and less painful procedure yielding up to 88 percent accuracy.